

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
7 July 2005 (07.07.2005)

PCT

(10) International Publication Number
WO 2005/060396 A2

(51) International Patent Classification: **Not classified**

(21) International Application Number:
PCT/US2004/026848

(22) International Filing Date: 18 August 2004 (18.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/495,973 18 August 2003 (18.08.2003) US

(71) Applicant (for all designated States except US): **THE GENERAL HOSPITAL CORPORATION** [US/US]; 55 Fruit Street, Boston, MA 02114 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BORENSTEIN, Jeffrey** [US/US]; 936 Highland Street, Holliston, MA 01746 (US). **CARTER, David** [US/US]; The Charles Stark Draper Laboratory, Inc., 555 Technology Square, Cambridge, MA 02139 (US). **VACANTI, Joseph** [US/US]; 14 Woodside Road, Winchester, MA 01890 (US).

(74) Agents: **LEAHY, Amy et al.**; Edwards & Angell, LLP, Three Stamford Plaza, 301 Tresser Boulevard, Suite 1310, Stamford, CT 06901 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NANOTOPOGRAPHIC COMPOSITIONS AND METHODS FOR CELLULAR ORGANIZATION IN TISSUE ENGINEERED STRUCTURES

(57) Abstract: The present invention relates to tissue engineered compositions and methods comprising nanotopographic surface topography ("nanotopography") for use in modulating the organization and/or function of multiple cell types.



WO 2005/060396 A2